



WAB10176P00170US
PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:)
JÜRGEN BOSS)
Serial No. 10/550,467)
Filed: July 17, 2006)
WARNING SYSTEM FOR PEOPLE IN
HAZARDOUS CONDITIONS
Examiner: Jack K. Wang
Group Art Unit 2612

DECLARATION UNDER 37 CFR 1.132

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

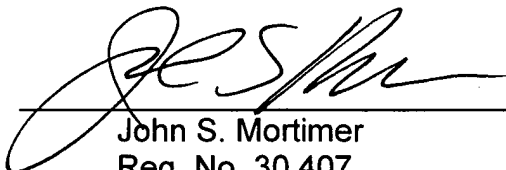
Sir:

In support of the Response to the Office Action dated October 29, 2008,
attached hereto is the Declaration Under 37 CFR 1.132 of Mr. Klaus-Dieter Dahrendorf.

Respectfully submitted,

WOOD, PHILLIPS, KATZ,
CLARK & MORTIMER

By


John S. Mortimer
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Dated: May 29, 2009

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**37 CFR 1.8
CERTIFICATE OF MAILING**

I hereby certify that this correspondence is being deposited
with the United States Postal Service as first class mail in
an envelope addressed to: Mail Stop ___, Commissioner
for Patents, P.O. Box 1450, Alexandria, VA 22313-1450,
on May 29, 2009.

Signature: 

Name: Linda Bowen

U.S. Patent Appl. Ser. No. 10/550,467 of Jürgen Boss

Declaration

5 I, Dipl.-Ing. Klaus-Dieter Dahrendorf, of Baseler
Str. 16, 12205 Berlin/Germany, declare as follows:

I am a technical engineer and have been working for
the company MSA Auer GmbH, Thiemannstr. 1, 12059
10 Berlin/Germany for 25 years.

MSA Auer GmbH produces safety appliances, e.g. moni-
toring and warning systems for people working in ha-
zardous environments.

15 MSA Auer GmbH is the applicant of the International
Patent Application No. PCT/DE2004/000378 from which
the above mentioned U.S. Patent Application has been
derived.

20 My educational background and my professional
experiences that relate to this technology of
MSA Auer GmbH are:

25 In 1963 I finished school with the university
entrance qualification (in German: Abitur).

From 1963 through 1972 I studied engineering
especially precision engineering at the Technical
30 University of Berlin

In 1972 I became an graduate engineer
(in German: Diplom-Ingenieur).

35 From 1972 through 1980 I worked as an

R & D (Research & Development) in the department of development for the electronic and magnetic heads (German: Magnetköpfe) in the electronic industry (BOGEN Company in Berlin)

5

From 1980 through 1983 I worked as a technical manager for ultrasonic cleaning machines (BANDELIN Company in Berlin)

10

In 1983 I started working as an engineer at MSA Auer GmbH in the development of monitoring and warning systems for persons working in hazardous environments, especially in the field of using electronic components for these systems.

15

From 1983 through 1987 I was an engineer for breathing protection and

from 1987 through 1996 I was head of the group for breathing protection (SCBA = Self Contained Breathing Apparatus)

20

From 1997 through 2002 I was head of the Engineering Department SCBA Masks at MSA Auer GmbH.

25

From 2002 until now I have been the manager for Engineering Services (e. g. documentation) and head of the Patent Department of MSA Auer GmbH.

30

As a result of my working I am skilled in the art of all products of MSA Auer GmbH and I am aware of the problems associated with the prior art, e. g. US 6,894,610 B2 (Schubert), which is based on the foreign application priority date of April 24, 2001 of German patent application 101 20 775.

35

My related work experiences on the claimed subject matter of U. S. Serial No. 10/550,467 (BOSS) and my familiarity not only with this particular equipment, but with wireless technology result from my time as head of the group for the development of breathing protection (SCBA = Self Contained Breathing Apparatus) and my time as head of the Engineering Department for SCBA masks.

During that time warning systems were developed for people working under hazardous operating conditions. These systems were connected pneumatically or galvanically to the SCBA breathing protection apparatus.

The indication system of a breathing protection apparatus is very important for the wearer or fireman, because the wearer or fireman only has air for his own breathing. At the time of development of the SCBA (Self Contained Breathing Apparatus) the safety of such systems was only given galvanically. This is the content of Schubert's patent.

There was wireless technology available and this technology was advanced enough to make the wireless connections long before the present invention was made. In spite of that, it did not occur to me and others skilled in this technical area, to change the wired communications to wireless. Instead, they just dealt with the problems and dangers associated with the wired communication components. The industry contended with the problems associated with hardwired connections over a substantial time period simply because no one appreciated that the available wireless technology could have been used and would address the persistent problems dealt with in the industry.

Further, a failure of the wireless equipment could have life threatening consequences.

5 For a long time industry has experienced problems with the heretofore known types of equipment and has lived with these problems because there was no feasible solution available.

10 For instance, modern protection clothing, which became more heat-resistant by the new NOMEX material, was developed for fireman. Further additional breathing protection apparatus had to be connected by cables through this clothing making quick actions
15 of the fireman difficult. Additionally, if the cables were arranged on the outside of the heat-resistant material, these cables had to be heat-resistant, too.

20 It is a matter of fact that fireman have to put on their clothes very quickly and act very quickly. The cables for the connection of the different parts of the protection apparatus were therefore counter-productive to the demands (requirements) of modern
25 protecting apparatus.

During my time with the development of breathing protection apparatus (SCBA) I became aware of the fact that Schubert's warning system was not practically orientated but very soon showed a lot of disadvantages and was, therefore, never produced.
30

As stated above, the prior art of Schubert was representative of the technology that existed before
35 the present invention was made. As noted above, I was very familiar with the Schubert technology which

only relates to hard-wired connections between components.

5 The prior art of Schubert is a monitoring and warning system for persons working in hazardous environments, comprising a monitoring device connected to a compressed air breathing apparatus with a micro-computer, data and alarm displays, alarm sensors, motion sensors, and a telemetric module bi-directionally connected with a base station, and having
10 a closed bus system secured to the person, to which the monitoring device and the telemetric module and a plurality of additional monitoring, communication and control units are connected selectively and
15 exchangeably, galvanically with a central power supply or galvanically isolated with a separate power supply via optocouplers, fiber optics or a high frequency radio connection.

20 The problems of this monitoring and warning system of Schubert were the cables to be worn around the body of a person and the cable links and plugs for the connection of the multiple units, which cannot be worn on every place of the body. Some units, e.g.
25 the gas warning device, have to be worn at a very special position on the body to have the exact information about explosive and toxic gases on time.

30 I became aware of these problems during my work and of the fact that these problems had bothered the industry for a long time. After testing several prototypes of Schubert's warning system I learned that the use of this system in hazardous operating conditions was not possible because of the galvanic wired
35 connections. I know that different attempts were

made to find other solutions to the problem before the invention was made by Mr. Boss.

5 I am familiar with the development of Schubert's monitoring and warning system because, as stated above, I was working for R & D as well as in the patent department of MSA Auer GmbH when, in March 2003 the inventor, Boss, had the idea of a warning system for people working in hazardous conditions
10 according to the above mentioned patent application. This warning system of Boss solved all problems as discussed above. The result of this invention was that Boss's warning system was produced instead of Schubert's warning system.

15 The wireless connections of the Boss system can be attached at the clothing of a firemen before any action is taken by the fire brigade. There is no time to attach the wireless connections at the time
20 of an emergency. More important, the wireless connections are attached to the clothing prior to the donning of a breathing protective mask.

25 Further, the wireless connection of Boss is very safe with respect to the function as each module is attached separately to the clothing of the fireman and only connected wireless with the other modules. Safety is very important for the people working in hazardous operating conditions. These wireless connections became safe enough for use in breathing
30 appliances without the necessity of the digital technology.

35 According to Schubert, a high-frequency radio connection is described as the connection between the telemetric module and the base station, only. All

modules of the system, according to Schubert, are arranged in a star shape, scanning and transferring data to the telemetric module via a closed or an open bus system, whereby the telemetric module is the only module by nature having a high-frequency radio connection to the distant base station.

It is a fact that the exact problems that have been contended with for years by the industry are the problems arising by using a bus, as the Schubert patent has taught up to now. These problems have been known by those in the industry and have persisted because of lack of solutions thereto.

It is an object of Boss's invention to provide a warning system for people working in hazardous conditions, which has a wide range of uses due to a simple and cost efficient base unit that can be extended at low cost to suit a particular purpose

The claimed subject matter overcomes the prior art by a warning system for people working in hazardous conditions, the warning system comprising:

a control unit with a motion detector, an alarm transmitter and a display, wherein the warning system further comprises a receiver and a memory for recording incidents integrated into the control unit, the control unit is configured to operate selectively as:

- a) a standalone base warning unit;
- b) via a radio connection with at least one of:
 - i) a radio pressure gauge for a compressed air breathing apparatus, made out by a pressure sensor with a short distance transmitter connected to a compressed air cylinder;

ii) a vital function radio monitor, including at least a vital sensor combined with a short distance transmitter for collecting a user's vital data;

5 iii) a radio measuring device for detecting gas and temperature conditions, including a gas or temperature sensor coupled with a short-distance transmitter;

c) via a physical link connection with at least one of

10 i) a radio data transmitter;

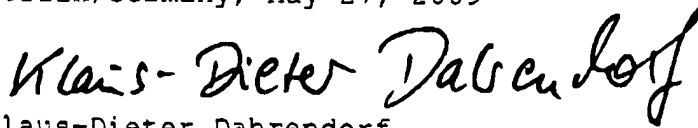
ii) a walkie-talkie;

wherein said control unit is configured to operate via said radio connection with each of said radio pressure gauge for the compressed air breathing apparatus, said vital function radio monitor and
15 said radio measuring device for detecting gas and temperature conditions, and

wherein said control unit is configured to operate via said physical link connection with each of said
20 radio data transmitter and said walkie-talkie.

I hereby declare that all statements made herein of my knowledge are true and that all statements made on information and belief are believed to be true;
25 and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under 18 U.S.C. 1001 and that such willful false statements may jeopardize the validity of the
30 application or any patent issued thereon.

Berlin/Germany, May 27, 2009


35 Klaus-Dieter Dahrendorf